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Before the

FEDERAL COMMUNICATIONS COMMISSION

Washington, D.C. 20554

In the Matter of	)	
	)	RM-8499
Amendment of The Commission's	)	
Rules to Establish a New Radio	)	
Service.	)	

To: The Commission

COMMENTS OF *REACT* INTERNATIONAL, INC.

to a

PETITION FOR RULE MAKING

submitted by

RADIO SHACK DIVISION OF

TANDY CORPORATION

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Dated: August 23, 1994

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EXECUTIVE SUMMARY

REACT International, Inc. (REACT) thanks Tandy Corporation for bringing to the attention of the Commission the need for additional, low cost, flexible, consumer grade radio communications alternatives. While the currently available services, including CB, GMRS, Cellular Radio Telephone, the Amateur Radio Service, and the (under development) Personal Communications Service (PCS) provide immediate and future alternatives for the family, they all fail to meet the needs of the consumer market. CB radio suffers from limitations resulting from use of technologies of the 1950's; the GMRS is not configured for easy use by the untrained family member; and cellular and PCS radio are priced so as to discourage use by internal, family matters.

While REACT strongly feels that additional communication alternatives are required by families as well as public service organizations, the proposal set forth by Tandy Corporation fails to address many, if not most, of the needs that can be identified. Therefore, REACT strongly urges the Commission to dismiss this Petition for Rule Making in RM-6499, and to move forward in discussions with the various constituencies that require improved radio communication alternatives.

REACT, with its structure of membership representation on an assortment of Task Groups, including Communications and Government Relations, would be pleased to enter a constructive dialogue to identify the specific needs of the family and/or public service volunteer. Once these needs have been clearly identified, representatives of the manufacturing and retail sales sectors of the American economy, such as Tandy Corporation, and its Radio Shack subsidiary, must be added to the discussion to

determine how these needs can be met in a fashion that will serve the public's convenience and necessity and, at the same time, provide attractive consumer markets.

DISCUSSION

I. BACKGROUND OF REACT INTERNATIONAL, INC.

REACT International, Inc. (REACT) is a worldwide, member based organization of public service Teams serving their local communities. Its membership includes over 450 Teams and 6500 individuals. "Radio Emergency Associated Communication Teams" serve their local communities in a broad array or programs, including:

- CB Channel 9 monitoring for providing emergency and motorist assistance to travelers.
- Working with local law enforcement agencies in community watch programs.
- Providing communications capabilities to disaster service organizations such as the American National Red Cross and the Salvation Army.
- Assisting with community events such as walk-a-thons, bike-a-thons, etc. to speed response of medical personnel and aiding with event administration.

REACT's mission of "Public Service through Communications" is filled through a mixture or radio services, including:

- The Citizens Band Radio Service (CB)
- The General Mobile Radio Service (GMRS)
- The Amateur Radio Service (ARS)
- Cellular Radio

Most REACT Teams and/or Team members are licensed to operate in more than one radio service, and many REACT Teams have membership active in all four of the cited services.

REACT International, Inc. is a member of National Voluntary Organizations Active in Disaster (NVOAD), and maintains Memorandums of Understanding with the American National Red Cross, the Salvation Army and the National Weather Service.

Finally, REACT is cited by Tandy Corporation in its Petition for Rule Making as one of the potential benefactors of the proposed Family Radio Service (FRS).

II. NEED FOR COMMUNICATIONS ALTERNATIVES

There exists today needs for additional and/or enhanced communications alternatives for the family and for public service volunteers. At this time there are four radio services available for use by the family and the public service volunteer:

- The Citizens Band Radio Service (CB)
- The General Mobile Radio Service (GMRS)
- The Amateur Radio Service (ARS)
- Cellular Radio

Each of these services can, and is, used by citizens seeking truly "personal" radio communications, such as for coordinating family activities and responding to the increasingly complex demands on the American family of the 1990's. In addition, these services are used by citizens providing community service, on volunteer bases. However, the limitations inherent in each of these services serve to reduce the utility of any one. For example:

- The Citizens Band Radio Service (CB) utilizes technology that dates back to the 1950's. While 40 years of research and development have made available such characteristics as improved clarity, selective calling, rule compliance through system design, and automatic trunking, *none* of these enhancements have been applied to the Citizens Band Radio Service.
- The General Mobile Radio Service (GMRS), given its current system design, limited number of available "channels", and requirement for active operator attention to assure rule compliance, is not capable, at this time, of handling an influx of thousands (millions?) of users that would result from implantation of Tandy's proposal.
- The Amateur Radio Service (ARS), with its requirement for operator licensing and intense operator attention to operating protocols, all but mandates that the user hold a high level of concern that can not be found in persons holding only a utility interest.
- Cellular Radio, while being one of the Commission's success stories for meeting a radio communication need, is still ill suited for meeting the radio needs of the family and the public service volunteer. Cellular radio's inherent integration with the public switched telephone network, and the resulting user economics, prevent its use by the family member from finding another, for example, in a shopping mall, or by a local volunteer operating in a community watch program.

III. THE PROPOSED FAMILY RADIO SERVICE FAILS TO MEET THESE NEEDS

The proposal advanced by Tandy Corporation fails to serve the communications needs it purports to meet. For example, many public service organizations have fled from the CB Radio Service simply because it is impossible to operate a town watch, provide radio communications in a disaster, or to call for emergency response personnel in a radio environment where great numbers of untrained operators seek to utilize a limited number of radio channels. It is precisely because of licensing requirements that the GMRS provides a more ordered environment that allows for community service. Elimination of licensing and allowing for a mass market appeal of GMRS equipment would render the service all but useless.

Tandy's proposal for a Family Radio Service will serve to heighten confusion in the GMRS regarding proper channel selection and use. In the early days of the Citizens Band Radio Service, the Commission's Rules reserved certain channel for intra-station communications, allowing inter-station communication on a subset of the 23 available. This proved totally unworkable in that operators routinely failed to comply with the stated requirements (the same type of requirements exist in the Maritime Radio Service, and, within the untrained pleasure boater community, the same confusion exists). It is therefore unrealistic for one to believe that FRS users will limit use of the 467/462.675 MHz GMRS channel to only emergency and assistance communications. Furthermore, Tandy proposes that the FRS share GMRS frequencies on a secondary authorization basis. It is unrealistic to think that an untrained operator who purchased a radio from a retail

store will even *understand* the concept of secondary authority, much less comply with the stated requirements.

Tandy's FRS proposal will also serve to intensify confusion regarding the sharing of the GMRS. For example, the GMRS, initially available for both personal and business licensees, experienced spectrum "range wars" when business users were forced to accept the presence of non-business, co-channel licenses, even though the rules clearly stated that no licensee had unique rights over others. Overlaying a FRS on the GMRS will only serve to blur these lines further, magnifying misunderstandings and causing the same user conflicts previously experienced in the GMRS and CB.

Finally, Tandy's proposal for a Family Radio Service fails to address the necessity for technology to replace the need for operators to assure rule compliance in any consumer grade radio service. Technologies such as Continuous Tone Controlled Squelch Systems (CTCSS) require a high level of operator training and attention to rule compliance. It is again unrealistic to think that a consumer, who just purchased two radios from a retail outlet, having received no training or operating experience, will even understand the concept of monitoring a channel "carrier access", much less make an effort to comply with the operating requirement. It is essential that a proposal for a consumer grade radio service, such as in Tandy's proposal, include sufficient technologies that assure rule compliance.

We are also surprised that Tandy fails to make application of current technologies inherent in its proposal for a FRS. For example, Digital Signal Processing (DSP), selective calling and trunking techniques are now commonplace in the radio communications

field, and their application to a FRS-type proposal would serve well any proposal, in any spectrum. Many of these techniques would not only improve the utility of such a service, they would also advance, if not assure, rule compliance.

IV. ACCESS OF FRS OPERATORS TO 467/462.675 MHz REPEATERS

In its proposal, Tandy suggests that FRS operators be allowed access to GMRS repeaters on the 467/462.675 MHz channel pair. While Tandy is to be commended on its *intent*, it is evident that Tandy fails to understand the local economics and dynamics of a GMRS repeater system.

First, while many community service organizations allow transient users to use their GMRS repeaters for emergency and assistance purposes, few wish to have just any operator "set-up-shop" on their repeater without prior authorization, which usually includes making some form of a contribution (economic or otherwise) to the sponsoring organization. The concept is akin to autopatch privileges on many Ham Radio repeaters -- the autopatch may be reserved for members and "transients", except in emergencies. Thus, while members and (sometimes) travelers are welcome to use the autopatch, "locals" are not welcome to use the autopatch unless involved in an emergency. While the sponsoring organization wants to be altruistic, altruism only goes so far.

Second, many community service organizations who sponsor GMRS repeaters have found that it can be difficult to operate an activity, be it community watch, local event, or response to an emergency, because of pre-existing channel loading, either from its own members or from co-channel licensees. While most of these organizations typically encourage use of their repeaters by travelers to respond to true emergencies,

patience will surely wear thin if unlicensed FRS operators constantly interrupt ongoing activities (possibly emergency situations) just to ask "...is anyone around...?"

Finally, as discussed above, the intertwining of untrained operators from differing radio services can go a long way to breeding misunderstandings, hard feelings, and (of greatest threat to vendors such as Radio Shack) dissatisfaction with the purchase. For years, operators in the Amateur Radio Service have enjoyed access, on a secondary basis, to frequencies co-assigned to other users (most typically governmental users). While not without drawbacks, this arrangement has worked well because of the sole reason that all operators involved have been well trained and have a full understanding of regulations, operating techniques and expectations involved. In the few cases where operators with primary authorizations have experienced interference from (a) secondary authorization operator(s), a system of operator identification has existed where the interfering station(s) could be identified and notified of the problems being caused. In an unlicensed FRS it will be unrealistic to expect such a harmonious co-existence.

V. ALTERNATIVES EXIST -- AND SHOULD BE EXPLORED

Many of the concepts advanced by Tandy contain merit, and should be implemented in a new, consumer grade radio service such as its proposed FRS. For example, Tandy asserts (at page 3) that:

- The need exists for the general public to communicate in a diversity of everyday situations without incurring exorbitant per minute charges or monthly services fees.
- Parents will have an extra measure of security by using FRS to monitor their children at play.

- Families and friends will be able to maintain close contact...

However, Tandy fails to demonstrate a balanced understanding of the unique characteristics of the GMRS, given the limited channel authorization, spectrum allocation and modulation scheme of the Service.

It also appears that Tandy fails to understand the unique operating requirements experienced by citizens acting in volunteer capacities. While REACT Teams, town watch organizations and other public service volunteer groups require improved communication alternatives, a service such as proposed by Tandy will meet few, if any, of these needs.

This is not to say that REACT disagrees with the idea of the FRS; on the contrary, REACT strongly agrees with the concept, and strongly urges the Commission to work with the representatives of the various user constituencies to identify mechanisms in future *or current* radio services to fill these needs. For example:

- Application of technologies such as Digital Signal Processing (DSP) and improved side-band techniques (such as Amplitude Compandored Single Sideband) to the CB Radio Service would go a long way toward reducing the major drawback of the service, the inherently poor signal quality.
- Adaptation of selective calling and/or trunking technologies to the CB Radio Service would eliminate a second major drawback -- having to listen to all the "garbage on the channel."
- Implementation of technologies to assure rules compliance, such as those that require monitoring of a channel carrier access prior to transmitting (or, better yet, equipment that prevents the operation of the transmitter when the receiver senses

the presence of a signal) would greatly reduce the incidence of interference in any consumer radio service.

REACT agrees with Tandy that the current schedule of GMRS regulatory and license processing fees are burdensome to the general public. The current fee structure of $80 per license will serve as an incentive to unlicensed operation. While REACT has long advocated retention of licensing, and reasonable license fees, in both the GMRS and the CBRS, we did so with the stated understanding that all fees be retained to fund service administration and enforcement. Rather than elimination of GMRS licenses, and licensing fees, REACT would prefer a multi-tiered approach where operators pay a minimal regulatory and license fee (on the order of $2 - $5 per year, multiplied by the term of the license), with a second tier for repeaters (on the order of $10 per year). This would serve to promote rule compliance, fund enforcement efforts, and help the user understand that the radio spectrum is a limited and unique national resource to be conserved and shared, not destroyed and wasted.

REACT thus urges the Commission to investigate all available alternatives, including enhancements to the CB Radio Service and GMRS that are long overdue, before taking specific action on the proposal advanced by Tandy.

VI. CONCLUSION

While Tandy is to be commended on the concepts advanced in its proposal, the service should not be implemented as proposed. A Family Radio Service, interlaced with the General Mobile Radio Service, as proposed by Tandy, would suffer from channel

congestion, interference, and customer dissatisfaction. In addition, the utility of the GMRS for volunteer service organizations would be greatly diminished.

REACT strongly urges the Commission to study alternatives for meeting the communications needs of individual, families, and volunteers working in their communities. This study should include the review of the existing personal radio services (including CB) to determine what enhancements, in the form of improved technology, regulatory changes and operator education, can be implemented.

Respectfully submitted,

August 23, 1994

James E. Bear, Chairman
Board of Directors
REACT International, Inc.

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CERTIFICATE OF SERVICE

I, Edward W. N. Smith, do hereby certify that a copy of the foregoing "Comments" of James E. Bear, Chairman of the Board of Directors, REACT International, Inc., was mailed first class postage prepaid, to the below listed parties, on this 23rd day of August, 1994:

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August 23, 1994

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